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LETTER - TROPICAL/INFECTIOUS AND PARASITIC DERMATOLOGY

Lobomycosis: single lesion on the lip☆

Dear Editor,

A 66-year-old male patient, a farmer from Coari, state of Amazonas, Brazil, had a lesion on the upper lip with a 10-year evolution. On examination, an erythematous, infiltrated tumor lesion with a firm consistency was observed on the right side of the upper lip (Fig. 1). The general clinical examination and laboratory tests showed no changes.

A biopsy of the lesion was performed and histopathology revealed a nodular granulomatous inflammatory infiltrate involving the entire dermis and hypodermis, consisting of epithelioid histiocytes and numerous giant cells, containing rounded fungal structures in a catenulate arrangement compatible with *Lacazia loboi* (Figs. 2 and 3).

Surgical excision of the lesion was performed (Fig. 4) and itraconazole, at a dose of 100 mg, every 12 hours, orally, for six months was prescribed, in an attempt to prevent recurrence. The patient is in the eighth month of follow-up, progressing satisfactorily, without recurrence of the lesion.

Lobomycosis (Jorge Lobo's disease) was first described in 1931 by the dermatologist Jorge Oliveira Lobo. It is a subcutaneous mycosis, usually characterized by nodular lesions with a keloid appearance; however, there may be lesion polymorphism, as plaques, papules, macules, verrucous lesions, ulcerations and scarring lesions; it evolutes slowly, sometimes making clinical diagnosis difficult.[1,2] The lesions are generally asymptomatic, although pruritus and dysesthesia may occur.[2] The disease is caused by a yeast-like fungus called *Lacazia loboi*, which was recently renamed *Paracoccidioides lobogeorgii* following current taxonomic rules, after a broad nomenclature review.[3]

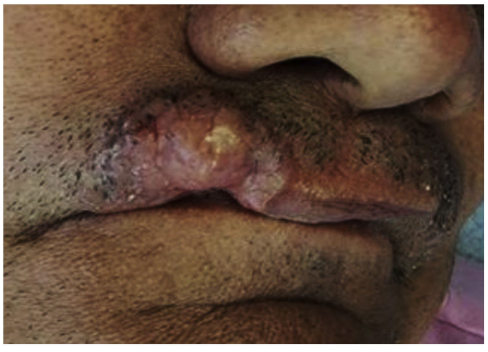

Figure 1 Tumor lesion with a 10-year evolution.

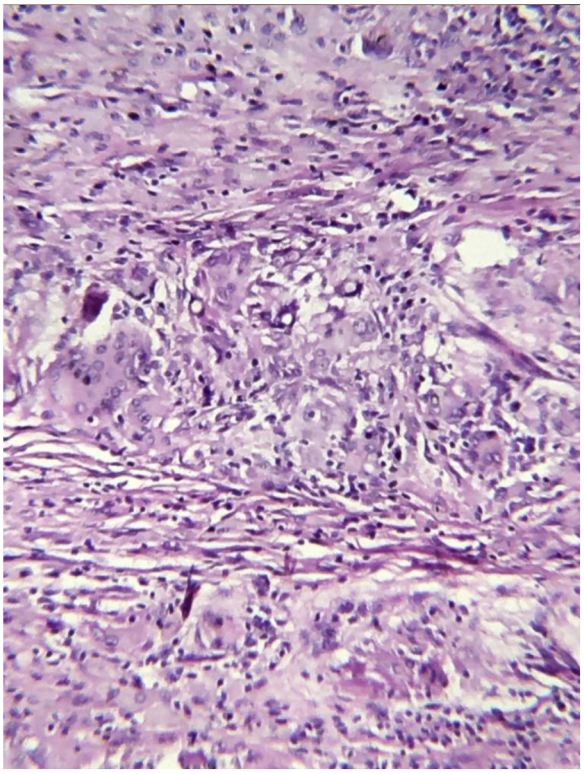

Figure 2 Histopathology of the surgical specimen. A granulomatous inflammatory reaction with a large number of giant cells containing rounded fungal elements can be seen (Hematoxylin & eosin, ×200).

Although the disease occurs throughout Central and South America, it is mainly observed in the Amazon region, in patients from rural areas.[2] The transmission mechanism is not exactly known, although traumatic implantation of the fungus into the skin is plausible. To date, the etiological agent has not been cultivated.

In most cases, lobomycosis is located mainly in the distal extremities and ears. Lip location is rare – there are only two cases recorded in the consulted literature.[4]

☆ Study conducted at the Fundação Hospitalar Alfredo da Matta, Manaus, AM, Brazil.

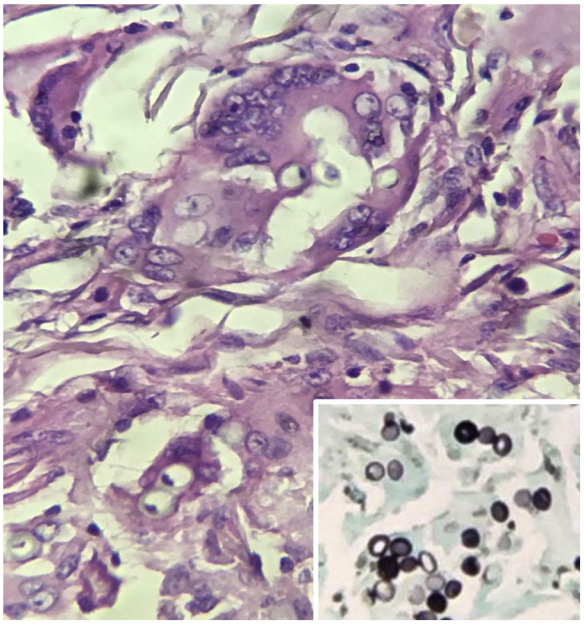

Figure 3 Histopathology of the surgical specimen. Presence of fungal elements, of similar size, with thick and birefringent walls inside giant cells (Hematoxylin & eosin, ×400). Microphotography: Rounded, birefringent fungal structures in a catenulate arrangement. (Grocott, ×600).

The diagnosis is based on clinical aspects, direct mycological examination by scarification, scraping, or curettage of the lesion, and histopathology.[1]

Currently, there is no completely satisfactory therapy. The treatment of choice for unifocal and localized forms is surgical excision, with safety margins, associated or not with clinical treatment to prevent recurrence. Multifocal forms should be treated, whenever possible, with a combination of excision surgery and adjuvant systemic treatment. Effective medications previously reported in the literature include posaconazole, itraconazole and clofazimine. It is worth highlighting the need for long-term follow-up, as recurrence is possible.[2,5]

New studies investigating the etiopathogenesis, transmission and treatment of lobomycosis are necessary to better elucidate this neglected and still obscure tropical disease that remains a challenge in dermatological practice.

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Authors' contributions

Kananda Kesye Sousa Nunes: Drafting and editing of the manuscript; critical review of the literature; critical review of the manuscript; approval of the final version of the manuscript.

Antonio Pedro Mendes Schettini: Drafting and editing of the manuscript; effective participation in research orientation; critical review of the literature; critical review of the manuscript; approval of the final version of the manuscript.

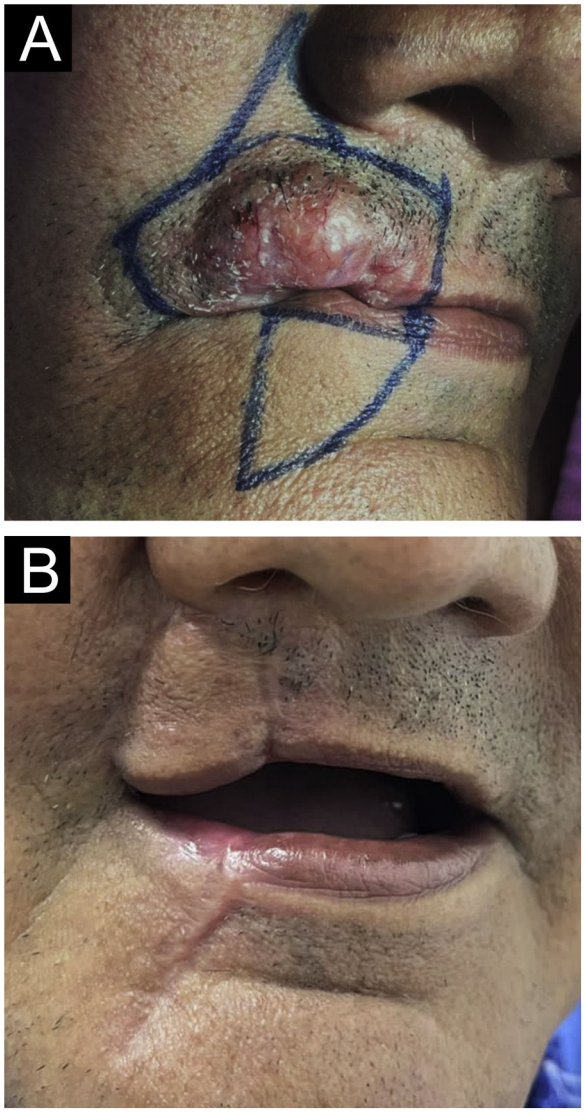

Figure 4 (A) Surgical markings before resection. (B) Five months after the procedure.

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Conflicts of interest

None declared.

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Treatment of eumycetoma with terbinafine alone and in combination with salvage therapy*

Dear Editor,

Mycetoma is a chronic disease that begins with the implantation or inoculation into the skin of microorganisms from soil and other sources. It is divided into two types according to etiology: eumycetoma, caused by filamentous fungi, and actinomycetoma, caused by aerobic filamentous bacteria.[1,2] It is considered a classic neglected and poverty-related disease, which is why the World Health Organization included it in the group of neglected diseases in 2016.[3] Mexico is the country with the most reports of mycetoma after Sudan, although there are differences in the mycological profile.[4,5] The simplicity of mycetoma diagnosis contrasts with its treatment, especially for eumycetomas, since, antifungal agents are scarce and expensive in a disease that requires a minimum treatment period of one year. The first choice is oral itraconazole, which responds well in some cases, but cure rates remain low. The response depends on a number of factors, including the size and extent of the mycetoma, the possible involvement of bones, and the patient's health status.[2,3,6] For these reasons, new effective and cost-effective therapeutic options should be sought. In particular, in those cases that do not respond to therapy with itraconazole, other treatments such as terbinafine alone or in combination should be tried.[7]

All cases here discussed were a confirmed diagnosis of eumycetoma, with observation of grains on direct examination, cultures (Sabouraud-dextrose agar), microscopic and molecular identification by PCR of the cultures obtained and skin biopsy. were performed for all of the cases. Cases that had failed therapy with itraconazole at therapeutic doses and for prolonged periods were included in the study, as were cases that experienced side effects or interactions with other drugs. Terbinafine doses varied from 250 to 750 daily, depending on disease severity. A complete blood count, liver function tests, renal function tests, and urinalysis were performed at the start of treatment and repeated every three months during treatment. Treatment success was evaluated clinically and by mycological examination, which included fresh examination and cultures to determine whether a complete cure or partial improvement had occurred.

Five patients were included in the study. The main demographic, clinical, mycological, and therapeutic data are shown in Table 1. Clinical and mycologic cure without relapse was achieved in 3 patients (60%) during follow-up up to one year after the last dose. Clinical improvement with significant tumor reduction was observed in two cases (40%) and no bone activity in one case (20%) (Fig. 1).

A series of 5 cases of eumycetoma treated with terbinafine was analyzed. A favorable response was observed, although a clinical and mycological cure was achieved in only three cases. In two patients (40%), itraconazole had been given at the correct dose and timing and had responded poorly, so a change in treatment was decided or due to side effects and drug interactions (dyspepsia and hypoglycemia), it is important to emphasize that terbinafine does not depend on the pH of its absorption, and its drug interactions are minimal, so it can be administered for a long time, necessary for chronic conditions such as mycetoma.[3,7]

Terbinafine has moderate activity against mycetoma. In this series (Table 1), clinical and mycological cure was achieved in three cases (60%) with the use of terbinafine, in two cases as monotherapy (500 mg/day dose and the other with 750 mg/day and reduced to 500 mg/day), with a treatment duration of 16 and 18 months, respectively (Fig. 2). It is important to note that in our series, three patients had osteolytic activity and cure was achieved in only one of them; previously, treatment resistance has been observed in eumycetoma with bone involvement.[8] N'diaye et al. from Senegal[8] reported the response to treatment with terbinafine in 27 patients with eumycetoma with a dose of 1,000 mg/day divided into two doses over 24–48 weeks. Another important experience with terbinafine was reported in Senegal by Sow et al.,[9] who included 68 patients

* Study conducted at the Dermatology Service of the Hospital General de México ''Dr. Eduardo Liceaga'', Ciudad de México, México.